

REMARKS

Applicant submits this Amendment in response to the Office Action mailed March 9, 2004. With this Office Action, claims 1-38 are pending in the application. Claims 1, 3, 6, 8, 13, 15, 21, 25, 27, 29, 31 and 37 have been amended. Claims 32-36 have been canceled. Claims 1-31 and 37-38 are now pending in this application. Entry of the above amendments to the claims is respectfully requested. Support for the amendments to the claims in which "oil" is changed to "component selected from oils, pigments, pharmacologically active ingredients and resins" can be found, for example, in the specification at page 5, lines 17-19. Accordingly, no new matter has been introduced by way of this amendment.

**Objection of Claims 5-7, 11-14, 19-21, 25, 26, 37 and 38:**

The Examiner has objected to Claims 5-7, 11-14, 19-21, 25, 26, 37 and 38 as being in improper form because "a multiple dependent claim cannot depend from any other multiple dependent claim".

Applicant wishes to direct the Examiner's attention to the Preliminary Amendment filed on February 5, 2002, in which claims 4-6, 10-13, 18-21, 24, 25, 29, 37 and 38 were amended to be dependent upon a non-multiple dependent claim. A copy of that Amendment is enclosed herewith. The filing of the Preliminary Amendment is also evidenced by the enclosed copy of the returned postcard listing the Preliminary Amendment as one of the documents received by the PTO on February 5, 2002. The claims, as presented above, reflect the amendments made thereto in the Preliminary Amendment. In view of these amendments, Applicant respectfully requests that the objection be withdrawn.

Applicant is aware that the Examiner did not treat these claims on their merits. Because Applicant believes that the claims are in proper form as previously presented, Applicant will address their patentability in view of the cited prior art as discussed in more detail below.

**Rejection of Claims 15-18 under 35 U.S.C. §102(b):**

The Examiner has rejected claims 15-18 under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,675,133 by Eggers et al (hereafter referred as Eggers).

Applicant respectfully traverses. Applicant's apparatus, as claimed in claim 15, requires a solvent, namely, iodotrifluoromethane to be provided in the first vessel. Eggers fails to disclose such a solvent in his extraction apparatus.

Anticipation requires that each and every element in a claim is disclosed in the cited prior art reference. Applicant respectfully submits that Eggers fails to disclose the solvent iodotrifluoromethane and therefore cannot anticipate claim 15. Likewise, claims 16-18 and claims 17-21 (previously not considered by the Examiner) are not anticipated by Eggers because they are dependent upon claim 15. Moreover, claims 19-20 are independently patentable over Eggers. Eggers did not disclose a cooling means associated with the second vessel (claim 19) nor a reservoir of solvent operatively connectable to the fluid flow circuit (claim 20).

In view of the above remarks, Applicant respectfully requests the rejection of claim 15-18 under 35 U.S.C. §102(b) in view of Eggers be withdrawn.

**Rejection of Claims 15-18 under 35 U.S.C. §102(e):**

The Examiner has rejected claims 15-18 under 35 U.S.C. §102(e) as being anticipated by U.S. Patent No. 6,248,910 by Franke (hereafter referred as Franke).

Applicant respectfully traverses. Applicant's apparatus, as claimed in claim 15, requires a solvent, namely, iodotrifluoromethane, to be provided in the first vessel. Franke fails to disclose such a solvent in his extraction apparatus.

Anticipation requires that each and every element in a claim is disclosed in the cited prior art reference. Applicant respectfully submits that Franke fails to disclose the solvent iodotrifluoromethane and therefore cannot anticipate claim 15. Likewise, claims 16-18 and claims 17-21 (previously not considered by the Examiner) are not anticipated by Eggers because they are dependent upon claim 15. Moreover, claims 19-20 are independently patentable over Franke. Franke did not disclose a cooling means associated with the second vessel. In fact, Franke prefers that the second vessel, i.e., the separation zone, be heated (see, Franke, col. 10, lines 11-13). Similarly, Franke did not disclose a reservoir of solvent operatively connectable to the fluid flow circuit (claim 20).

In view of the above remarks, Applicant respectfully requests the rejection of claim 15-18 under 35 U.S.C. §102(e) in view of Franke be withdrawn.

**Rejection of Claims 1-4, 8-10, 22-24 and 27-36 under 35 U.S.C. §103(a):**

The Examiner has rejected claims 1-4, 8-10, 22-24 and 27-36 under 35 U.S.C. §103(a) for being obvious over Franke in view of U.S. Patent No. 5,892,136 by Nagasaki et al (hereafter referred as Nagasaki). In particular, the Examiner contends that Frank discloses solvent extraction of oil from oil-bearing substrates. The preferred solvents disclosed in Franke include those which are normally in a gaseous state (at room temperature and atmospheric pressure), such as CHF<sub>3</sub>, CClF<sub>3</sub> and CFBr<sub>3</sub> and other halogenated hydrocarbons. The Examiner noted that Franke did not specifically disclose iodotrifluoromethane as claimed in the instant invention. In overcoming this deficiency of Franke in specifically disclosing iodotrifluoromethane as an extracting solvent, the Examiner turned to the disclosure of Nagasaki. In particular, the Examiner contends that Nagasaki discloses the making of iodotrifluoromethane, which is gaseous, and its use in the manufacturing of agricultural and pharmaceutical chemicals. The Examiner then concludes that it would be obvious to one skilled in the art to use iodotrifluoromethane as a solvent for the extraction process disclosed in Franke because iodotrifluoromethane is a “similar solvent” to CHF<sub>3</sub>, CClF<sub>3</sub> and CFBr<sub>3</sub> in terms of chemical structures and solvent properties.

Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness. The courts have consistently held that structural similarity alone is not sufficient to establish obviousness. See, e.g., *Eli Lilly and Co. v. Zenith Goldline Pharmaceuticals, Inc.*, 2001 U.S. Dist. LEXIS 18361 at \*24 (S.D. Indiana). In particular, a *prima facie* case of obviousness for a chemical compound requires not only that the prior art compounds are structurally similar, but that the prior art reference itself must provide a reason or motivation for one skilled in the art to make the claimed compounds. See, e.g., *Yamanouchi Pharmaceutical Co., Ltd. v. Danbury Pharmacal, Inc.*, 231 .3d 1339, 1343 (Fed. Cir. 2002), and *In re Dillion* 919 F.2d 688, 692 (Fed. Cir. 1990) (en banc) (emphasis added).

Applicant respectfully submits that Franke provides no motivation for one skilled in the art to select iodotrifluoromethane out of the genus of the "halogenated hydrocarbons" in Franke, even in view of the three specific solvents disclosed ( $\text{CHF}_3$ ,  $\text{CClF}_3$  and  $\text{CFBr}_3$ ). In fact, Franke provides no more disclosure than to simply name these three solvents among numerous others. Moreover, as the Examiner points out, Frank discloses that suitable solvents for the process disclosed therein are gaseous at room temperature and atmospheric pressure. However,  $\text{CFBr}_3$  has a boiling point of 106°C and is clearly not gaseous at room temperature and atmospheric pressure. There is therefore no clear or logical extrapolation for one skilled in the art, having the knowledge of the physical properties of  $\text{CHF}_3$ ,  $\text{CClF}_3$  and  $\text{CFBr}_3$ , to arrive at iodotrifluoromethane, which is gaseous, in view of the inconsistency in the disclosure of Franke.

The deficiency of Franke in providing any basis to modify the teachings therein in order to arrive at iodotrifluoromethane is not remedied by Nagasaki, which simply discloses a process of making iodotrifluoromethane. Moreover, the two references are non-analogous art, in other words, they are not in the same field of endeavor nor are they related to each other. The Examiner appears to be in the position that Nakasaki discloses that iodotrifluoromethane can be used in the manufacturing of agricultural and pharmaceutical chemicals, which use "is also disclosed by Franke". Applicant respectfully disagrees. Franke's halogenated solvents are useful in extracting oil from oil-bearing substrate. The solvent extraction disclosed in Franke is a physical process in which no chemical transformation takes place; the oil and the solvent are eventually separately recovered. Nagasaki, on the other hand, discloses that iodotrifluoromethane is useful as a "fluorine containing intermediate compound for introducing a trifluoro group in production of surfactants, agriculturals and pharmaceuticals, and the like". In other words, in Nagasaki, iodotrifluoromethane can be used in a chemical transformation during which the  $-\text{CF}_3$  group can be introduced to another compound. To contend that Nagasaki remedies the deficiency of Franke in providing the necessary motivation for one skilled in the art to select iodotrifluoromethane from the broad genus of the halogenated hydrocarbon solvents disclosed in Franke is a contention based on impermissible hindsight. Accordingly, because Franke fails to provide any motivation for one skilled in the art to go beyond the solvents

disclosed therein, and because Nagasaki adds no new insight to that disclosure, Applicant respectfully submits that the Examiner has not established a *prima facie* case of obviousness.

For the same reason, Claims 2-14 are dependent upon claim 1 are also not obvious in view of the disclosures of Franke and Nagasaki. Likewise, Claims 22-31, which are directed to related method claims wherein iodotrifluoromethane is used as the extracting solvent, and the useful components such as oil are separated out in various conditions, are also not obvious over Franke and Nagasaki. Claims 37-38 are directed to the components recovered according to the methods claimed and are therefore limited by the non-obvious methods. They, too are not obvious.

In conclusion, Applicant respectfully submits that Franke fails to provide any motivation for one skilled in the art to select the specific solvent iodotrifluoromethane out of the group of solvents disclosed therein. There is not even logical correlation among the three solvents specifically disclosed in Franke in light of the fact that  $CFBr_3$  is a liquid while the other two are gases at room temperature. The lack of any disclosure in Franke, besides the names of these solvents, provides no motivation for one skilled in the art to modify the teachings in Franke in order to arrive at iodotrifluoromethane as an extracting solvent. Accordingly, Applicant respectfully submits that a *prima facie* case of obviousness has not been established. Withdrawal of the rejection of claims 1-4, 8-10, 22-24 and 27-36 under 35 U.S.C. §103(a) is therefore respectfully requested.

The Director is authorized to charge any additional fees due by way of this Amendment, or credit any overpayment, to our Deposit Account No. 19-1090.

Application No. 10/049,145  
Reply to Office Action dated March 9, 2004

All of the claims remaining in the application are now clearly allowable.  
Favorable consideration and a Notice of Allowance are earnestly solicited.

Respectfully submitted,  
SEED Intellectual Property Law Group PLLC

Carol J. Roth  
Carol J. Roth  
Registration No. 32,783

Hai Han  
Hai Han, Ph.D.  
Registration No. 54,150

CJR:cw

Enclosures:

Petition for Extension of Time  
Copy of Preliminary Amendment submitted 02/05/02  
Copy of return postcard submitted 02/05/02

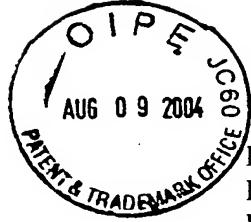
701 Fifth Avenue, Suite 6300  
Seattle, Washington 98104-7092  
Phone: (206) 622-4900  
Fax: (206) 682-6031

506006\_1.DOC

EXPRESS MAIL NO. EV064839565US

1

COPY



## PATENT COOPERATION TREATY

Int'l Application No. : PCT/GB00/02957  
 Int'l Filing Date : 04 August 2000  
 U.S. Application No. : Not yet known  
 Inventors : WILDE, Peter Frederick  
 Title : PROCESS AND APPARATUS FOR PREPAING  
           EXTRACTS AND OILS FROM PLANTS AND OTHER  
           METTER  
  
 Docket No. : 690100.402USPC  
 Date : 05 February 2002

Box PCT  
 Commissioner for Patents  
 Washington DC 20231-0001

PRELIMINARY AMENDMENT

Sir:

Prior to calculation of the filing fee, and prior to examination of the application, Applicant respectfully requests entry of the present preliminary amendment in the above-identified United States National Phase patent application.

Please amend the claims as follows:

In the Claims:

Please cancel claims 32, 33, 35 and 36, without prejudice.

Please amend claims 4-6, 10-13, 18-21, 24, 25, 29, 37 and 38 to recite as follows:

4. A method as claimed in claim 2 further comprising the step of applying heat to heat the solvent in the first vessel.

5. A method as claimed in claim 2 further comprising the step of cooling the solution in the second vessel.

COPY

6. A method as claimed in claim 1 including the additional step, after step (a), of adding one or more further solvents to the solution of oil in the solvent comprising iodotrifluoromethane so as to reduce the range and/or quantity of solutes dissolved.

10. A method as claimed in claim 8 further comprising the step of cooling the contents of the second vessel.

11. A method as claimed in claim 8 further comprising recovering the separated solvent for use in further extractions.

12. A method as claimed in claims 1 or 8 wherein the optional co-solvent is selected from 1,1,1,2-tetrafluoroethane and 1,1,1,2,2,3,4,5,5,5-decafluoropentane.

13. A method as claimed in claim 8 including the additional step, after step (c), of adding one or more further solvents to the solution of oil in the solvent comprising iodotrifluoromethane so as to reduce the range and/or quantity of solutes dissolved.

18. An apparatus as claimed in claim 16 including heating means for heating the solvent in the first vessel or adjacent inlet of the first vessel.

19. An apparatus as claimed in claim 16 including cooling means for cooling the contents of the second vessel.

20. An apparatus as claimed in claim 15 further comprising a reservoir of solvent operatively connectable to the fluid flow circuit.

21. An apparatus as claimed in claim 15 further comprising means for withdrawing, from the second vessel or from the connecting means adjacent the second vessel, oil which has separated from the solvent.

24. A method as claimed in claim 22 wherein step (i) includes heating the solvent.

25. A method as claimed in claim 22 including the additional step, after step (i), of adding one or more further solvents to the solution of oil in the solvent comprising iodotrifluoromethane so as to reduce the range and/or quantity of solutes dissolved.

29. A method as claimed in claim 27 including the additional step, after step (i), of adding one or more further solvents to the solution of oil in the solvent comprising iodotrifluoromethane so as to reduce the range and/or quantity of solutes dissolved.

37. An oil obtainable by, or when obtained by, the method of any of claims 1, 8, 22 or 27.

38. A vegetable oil for use in foodstuffs obtainable by, or when obtained by, the method of any of claims 1, 8, 22 or 27 and containing substantially no residue of solvent, especially iodotrifluoromethane.

REMARKS

The foregoing amendments have been made in order to place the claims into proper form for examination by the U.S. Patent Office. No new matter has been added by way of this amendment. All claims are canceled without prejudice to their being added back to the application, or submitted for examination in a continuation application.

Attached to this Preliminary Amendment is an Appendix showing how the claims have been amended, with deleted text indicated by strikethrough, and added text indicated by underlining.

**COPY**

4

An early examination of the application is earnestly solicited.

Respectfully submitted,  
Seed Intellectual Property Law Group PLLC



David W. Parker, Ph.D.  
Registration No. 37,414

DWP:km

Enclosure: Appendix

701 Fifth Avenue, Suite 6300  
Seattle, Washington 98104-7092  
(206) 622-4900; Fax: (206) 682-6031

C:\NrPortb\liManage\DAVIDP\255123\_2.DOC

**COPY**

**APPENDIX****Claim Amendments**

4. A method as claimed in claim 2 or 3 further comprising the step of applying heat to heat the solvent in the first vessel.

5. A method as claimed in ~~any of claims~~ claim 2 to 4 further comprising the step of cooling the solution in the second vessel.

6. A method ~~according to any of claims~~ as claimed in claim 1 to 5 including the additional step, after step (a), of adding one or more further solvents to the solution of oil in the solvent comprising iodotrifluoromethane so as to reduce the range and/or quantity of solutes dissolved.

10. A method as claimed in claim 8 or 9 further comprising the step of cooling the contents of the second vessel.

11. A method as claimed in ~~any of claims~~ claim 8 to 10 further comprising recovering the separated solvent for use in further extractions.

12. A method as claimed in ~~any preceding claim~~ in claims 1 or 8 wherein the optional co-solvent is selected from 1,1,1,2-tetrafluoroethane and 1,1,1,2,2,3,4,5,5,5-decafluoropentane.

13. A method ~~according to any of claims~~ as claimed in claim 8 to 12 including the additional step, after step (c), of adding one or more further solvents to the solution of oil in the solvent comprising iodotrifluoromethane so as to reduce the range and/or quantity of solutes dissolved.

18. An apparatus as claimed in claim 16 ~~or 17~~ including heating means for heating the solvent in the first vessel or adjacent inlet of the first vessel.

19. An apparatus as claimed in ~~any of claims~~ claim 16 to 18 including cooling means for cooling the contents of the second vessel.

20. An apparatus as claimed in ~~any of~~ claims 15 ~~to 19~~ further comprising a reservoir of solvent operatively connectable to the fluid flow circuit.

21. An apparatus as claimed in ~~any of~~ claims 15 ~~or 20~~ further comprising means for withdrawing, from the second vessel or from the connecting means adjacent the second vessel, oil which has separated from the solvent.

24. A method as claimed in claim 22 ~~or 23~~ wherein step (i) includes heating the solvent.

25. A method ~~according to any of claims as claimed in claim~~ 22 to 24 including the additional step, after step (i), of adding one or more further solvents to the solution of oil in the solvent comprising iodotrifluoromethane so as to reduce the range and/or quantity of solutes dissolved.

29. A method ~~according to as claimed in~~ claim 27 or claim 28 including the additional step, after step (i), of adding one or more further solvents to the solution of oil in the solvent comprising iodotrifluoromethane so as to reduce the range and/or quantity of solutes dissolved.

37. An oil obtainable by, or when obtained by, the method of claims ~~1 to 14 or 22 to 30~~ 1, 8, 22 or 27.

38. A vegetable oil for use in foodstuffs obtainable by, or when obtained by, the method of any of claims ~~1 to 14 or 22 to 30~~ 1, 8, 22 or 27 and containing substantially no residue of solvent, especially iodotrifluoromethane.



# COPY

Express Mail No. EV064839565US

690100.402USPC  
DWP:km

Date Stamp

SENT: 05 February 2002  
DUE: 05 February 2002

Box PCT  
Assistant Commissioner for Patents  
Washington, DC 20231-0001

10/049145  
JC10 Rec'd PCT/PTO 05 FEB 2002

Kindly acknowledge receipt of the below-listed documents by placing your receiving stamp hereon and mailing:

Conversion of PCT/GB00/02957, filed 04 August 2000, Entitled "PROCESS AND APPARATUS FOR PREPARING EXTRACTS AND OILS FROM PLANTS AND OTHER MATTER" into US National Stage consisting of: Form PTO-1390 (2 pages + copy); Preliminary Amendment (6 pages) Check #19302 in the amount of \$804.

SEED INTELLECTUAL PROPERTY LAW GROUP PLLC